SUPPORT FOR THE AMENDMENTS

Support for the amendment of Claims 1 and 5 is found on pages 23 and 24 in the specification.

Claims 6 and 8 are amended to use wording and structure consistent with U.S. patent law practice.

No new matter is believed added to this application by entry of this amendment.

Upon entry of this amendment, Claims 1-17 are active.

REMARKS/ARGUMENTS

The claimed invention provides a hyperbranched polyester comprising ethylenically unsaturated groups, obtained by reacting at least one compound having at least one ethylenic double bond with at least one hyperbranched polyester. The hyperbranched polyester is obtained by condensing at least one dicarboxylic acid or derivative thereof with at least one at least trifunctional alcohol; or by condensing at least one tricarboxylic or higher polycarboxylic acid or derivative thereof with at least one diol. In either method a molar ratio of hydroxyl groups of the at least one at least trifunctional alcohol or at least one diol to carboxyl groups of the at least one dicarboxylic acid or at least one tricarboxylic or higher polycarboxylic acid, respectively, is from 1.5/1 to 1/1.5.

Applicants respectfully note that Claim 1 is amended herein to recite that the at least one compound having at least one ethylenic double bond is reacted with the at least one hyperbranched polyester to obtain the hyperbranched polyester comprising ethylenically unsaturated groups.

The rejection of Claims 1-5 and 7-13, 15 and 16 under 35 U.S.C. 102(b) over Saitoh et al. (U.S. 5,566,027) is respectfully traversed.

Saitoh describes a composition containing a polyfunctional urethane-modified polyester (meth)acrylate of a polyester oligomer and a plurality of (meth)acryoyl groups bonded to the oligomer (Abstract). Saitoh disclose a three-step reaction – first making a hydroxyl terminated polyester, then modifying it with a diisocyanate (column 3, line 35) so a polyurethane will be formed ("polyfunctional urethane-modified polyester", see column 2, line 27), and then the polyfunctional urethane-modified polyester is reacted with (meth)acrylic acid. Applicants submit that the intermediate polyfunctional urethane-modified polyester disclosed by Saitoh is thus different from the hyperbranched polyester according to the invention and therefore the final products obtained would be different.

As the cited reference does not disclose or suggest the hyperbranched polyester according to the present invention, Applicants respectfully request that the rejection of Claims 1-5, 7-13, 15 and 16 under 35 U.S.C. 102(b) over Saitoh be withdrawn.

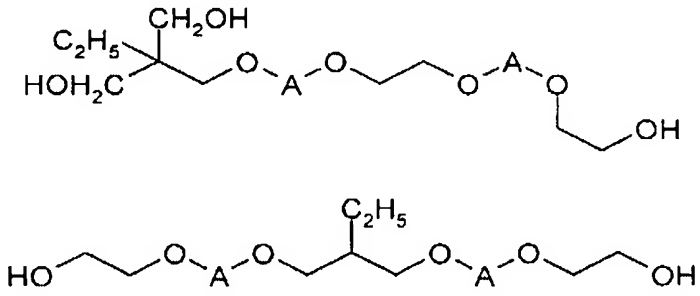
The rejection of Claims 1-5, 7-13 and 15-17 under 35 U.S.C. 102(b) and in the alternative under 35 U.S.C. 103(a) over Meixner et al. (U.S. 4,983,712) is respectfully traversed.

Meixner describes a polyester having one or more acryloyl groups based on a polyester containing a dicarboxylic acid component and a polyol component having both dihydric and trihydric alcohols (Abstract). Examples of the invention (1-3) described in Table 1 contain 1 mole total of dicarboxylic component (i.e., 2 mole -CO_2H), 1.2 mole dihydric alcohol (ethylene glycol) and 0.5 mole trihydric alcohol (1.2 x 2 and 0.5 x 3 = 3.9 mole OH). Therefore, the reference describes a OH/ CO_2H ratio of 1.95 (3.9/2) which is not within the claimed range of the present invention.

Applicants further submit that one of ordinary skill in the art would recognize that due to the extreme amount of diol present in the reference polyester, twice as much as the triol, no

hyperbranched polyesters could be formed. Rather, a completely alcohol-terminated polyester would be formed, with an acid number of zero or almost zero.

Applicants submit that based upon the numbers of the reference, after the first step the following molecules will remain in the reaction composition of Meixner:



A is an integer that characterizes the hydrocarbon moiety of the diacid. In addition, starting materials such as diol may be present.

Thus, Applicants submit that Meixner does not describe the formation of hyper-branched polyesters. Accordingly, Meixner does not disclose or suggest the hyperbranched polyester comprising ethylenically unsaturated groups as according to the present invention and cannot anticipate the subject matter of the instant claims.

In view of the above, Applicants respectfully request that the rejection of Claims 1-5, 7-13 and 15-17 under 35 U.S.C. 102(b) over Meixner be withdrawn.

Additionally, as described above, Meixner does not suggest or provide motivation which would have led one of ordinary skill in the art, at the time of the present invention to the hyperbranched polyester of the claimed invention. Therefore, Applicants respectfully request that the rejection of Claims 3-4 under 35 U.S.C. 103(a) over Meixner be withdrawn.

The rejection of Claim 6 under 35 U.S.C. 103(a) over Saitoh is respectfully traversed.

As previously discussed, Saitoh describes a **three-step reaction** –1)first making a hydroxyl terminated polyester; 2) then modifying it with a diisocyanate to form a

polyurethane and 3) reacting the polyfunctional urethane-modified polyester with a (meth)acrylic acid.

In contrast, the method according to the present invention is a **two stage** process (Claim 5) or a single stage process (Claim 6) and does not require formation of a polyurethane intermediate material as employed by Saitoh.

As the cited reference does not disclose or suggest the process according to the present invention, Applicants submit the reference cannot render the invention obvious and respectfully request that the rejection of Claim 6 under 35 U.S.C. 103(a) over Saitoh be withdrawn.

The rejection of Claim 6 under 35 U.S.C. 103(a) over Meixner is respectfully traversed.

Applicants have described that this reference does not describe the OH/ CO_2H ratio of the claimed invention and that because of the amount of diol present in the reference polyester, twice as much as the triol, no hyperbranched polyesters could be formed. Claim 6 depends from Claim 1 and includes all the description of the independent claim. As the cited reference is deficient with respect to Claim 1, Meixner cannot render dependent Claim 6 obvious. Accordingly Applicants respectfully request that the rejection of Claim 6 under 35 U.S.C. 103(a) over Meixner be withdrawn.

The rejections of Claim 14 under 35 U.S.C. 103(a) over Saitoh or Meixner in view of Overbeek et al.(WO 02/32982) is respectfully traversed.

Claim 14 directly depends from Claim 1 and includes all the description of the independent claim. The deficiencies of each of the primary references is described above. Overbeek is cited to show a polydispersity index value. However, Applicants submit that the secondary reference does not disclose or suggest the hyperbranched polyester comprising unsaturated groups as claimed in claim 1 and therefore does not cure the deficiencies of

Saitoh and Meixner as described. Accordingly, Applicants submit the none of the cited combinations can render the present invention obvious and respectfully request that the rejections of Claim 14 under 35 U.S.C. 103(a) over Saitoh or Meixner in view of Overbeek be withdrawn.

Applicants respectfully submit that the above-identified application is now in condition for allowance and early notice of such action is earnestly solicited.

Respectfully submitted,

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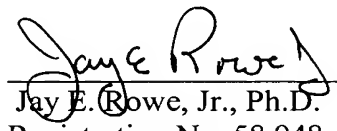

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